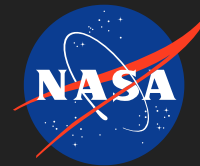


## Predicting the Dust Environment During Powered Descent on Mars

Completed Technology Project (2017 - 2018)



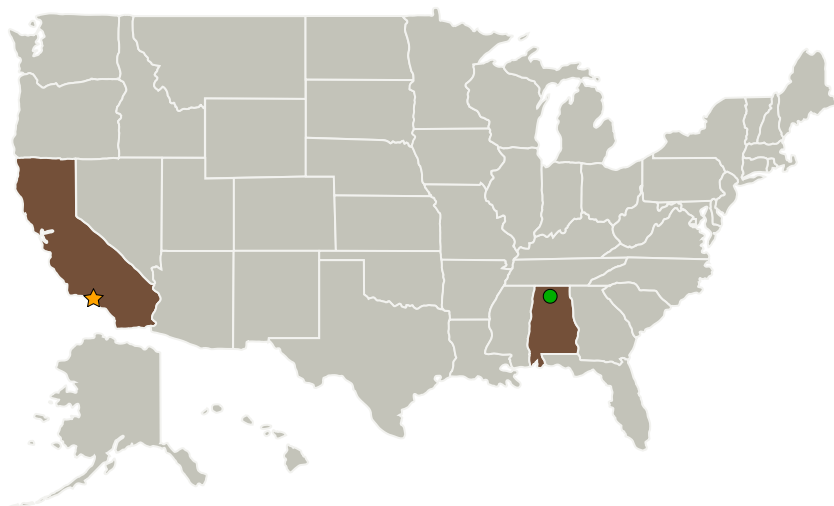
## Project Introduction

Discuss the current state-of-the-art and the limitations of current plume/surface multi-phase flow modeling.

## Anticipated Benefits

We are currently unable to accurately predict the dust environment during powered descent on Mars. Current M2020 ERD requirement stems from an Apollo era model.

## Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Jet Propulsion Laboratory(JPL)	Lead Organization	NASA Center	Pasadena, California
● Marshall Space Flight Center(MSFC)	Supporting Organization	NASA Center	Huntsville, Alabama

### Primary U.S. Work Locations

Alabama	California
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Predicting the Dust Environment During Powered Descent on Mars

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## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Center / Facility:

Jet Propulsion Laboratory (JPL)

### Responsible Program:

Center Innovation Fund: JPL CIF

# Predicting the Dust Environment During Powered Descent on Mars

Completed Technology Project (2017 - 2018)



## Project Management

**Program Director:**

Michael R Lapointe

**Program Manager:**

Fred Y Hadaegh

**Principal Investigator:**

Jason Rabinovitch

## Technology Areas

**Primary:**

- TX09 Entry, Descent, and Landing
  - └ TX09.4 Vehicle Systems
    - └ TX09.4.5 Modeling and Simulation for EDL

## Target Destination

Mars